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Economic & Regional Development Agreement

CANADA-BRITISH COLUMBIA FOREST RESOURCE DEVELOPMENT AGREEMENT

ANNUAL REPORT 1985/86

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BC

CANADA-BRITISH COLUMBIA

FOREST RESOURCE DEVELOPMENT AGREEMENT

(FRDA)

1985 - 1990

1985/1986 ANNUAL REPORT

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23-1-87
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CANADA-BRITISH COLUMBIA FOREST RESOURCE DEVELOPMENT AGREEMENT, 1985 - 1990

1985/1986 ANNUAL REPORT

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CANADA-BRITISH COLUMBIA
FOREST RESOURCES DEVELOPMENT AGREEMENT

EXECUTIVE SUMMARY

The initial year of the Canada-British Columbia Forest Resource Development Agreement (FRDA) had a total expenditure of $25,420,590 of which the Federal Government contributed $9,799,943 and the Provincial Government contributed $15,620,647. FRDA created some 56 000 person days of employment during 1985/1986.

During 1985/1986 a total of 127 212 ha of Crown land was treated or surveyed, exceeding the goals set for the year. The area treated represents 20% of the five-year goals for the Agreement. The success of the first year can be attributed in part to preliminary work accomplished under FRDA's predecessor, the Canada-British Columbia Intensive Forest Management Subsidiary Agreement.

The emphasis of the first year of FRDA was on the collection of seeds and preparation of seedlings to fulfill the requirements of FRDA. Consequently, seed processing and container seedling facilities were improved and expanded under the provincial unilaterally funded program.

Emphasis was placed on surveys, developing treatment prescriptions and management plans. This was particularly important for the federal unilaterally funded component, which initiated programs on Indian, privately owned and federal lands.

A concentrated effort was initiated to improve the knowledge required to reforest backlog areas and to demonstrate the results under the Extension, Demonstration and R&D subprograms. In addition, a communications strategy was developed and a series of publications was initiated.

The budget for the 1986/1987 fiscal year is:

Component	Cost-Shared Ratio	Budget ($ million)
Cost-shared	50% Federal, 50% Provincial	35.2
Federal component	100% Federal	4.4
Provincial component	100% Provincial	4.4
Total Budget		44.0

CANADA-BRITISH COLUMBIA
FOREST RESOURCES DEVELOPMENT AGREEMENT

OVERVIEW

Duration 1985 - 1990

Signed May 25, 1985

Between

The Government of Canada
represented by the Minister of Agriculture
(Minister of State, Forestry)

And

The Government of the Province of British Columbia
represented by the Minister of Forests and the
Minister of Economic Development

Authority

Canada-British Columbia Economic and Regional Development Agreement, signed November 23, 1984

Federal
Canada Forestry Development and Research Act, 1966 - 1967

Provincial
Ministry of Forests Act RSBC, 1979

Funding, 1985-1990

Total: $300 million ($150 million federal, $150 million provincial).

Cost-Shared Ratio

$240 million cost-shared
$30 million unilaterally delivered federal component
$30 million unilaterally delivered provincial component

Employment Between 1985 and 1990, FRDA programs are expected to generate 500 full-time jobs and short-term employment for over 15 000 persons.

A. INTRODUCTION TO FRDA

The Canada-British Columbia Forest Resource Development Agreement (FRDA) is a joint initiative of Canada and the Province of British Columbia in recognition of the importance of the forest industry to the economic and social well being of the Province of British Columbia.

The forestry sector in British Columbia contributes some 86 000 jobs directly and some 172 000 jobs indirectly. It constitutes 10% of the total Gross Provincial Product. Many communities are highly dependent upon the forest industry as their major or only economic base.

However, there are some 737 880 ha of non-satisfactorily restocked lands on good and medium sites which are not contributing to forest growth. In addition, there are many established juvenile stands which need intensive forest management to sustain growth.

Consequently, the Agreement is concentrating on:

a) Managing and reforesting part of the backlog of non-satisfactorily restocked lands;

b) Intensively managing selected forest stands;

c) Supporting of forestry research by government and non-government organizations;

d) Assisting the forest industry through studies of utilization, marketing and product development, technology transfer and training.

B. FRDA ADMINISTRATION

A joint federal-provincial Management Committee, shown in Figure 1, has been charged by the Provincial and Federal Ministers with the responsibility of implementing the FRDA Agreement.

The Management Committee appointed working groups, shown in Figure 2, to review and make recommendations of subprograms, activities and projects. During 1985/1986, the working groups developed operational guidelines which were approved by the Management Committee.

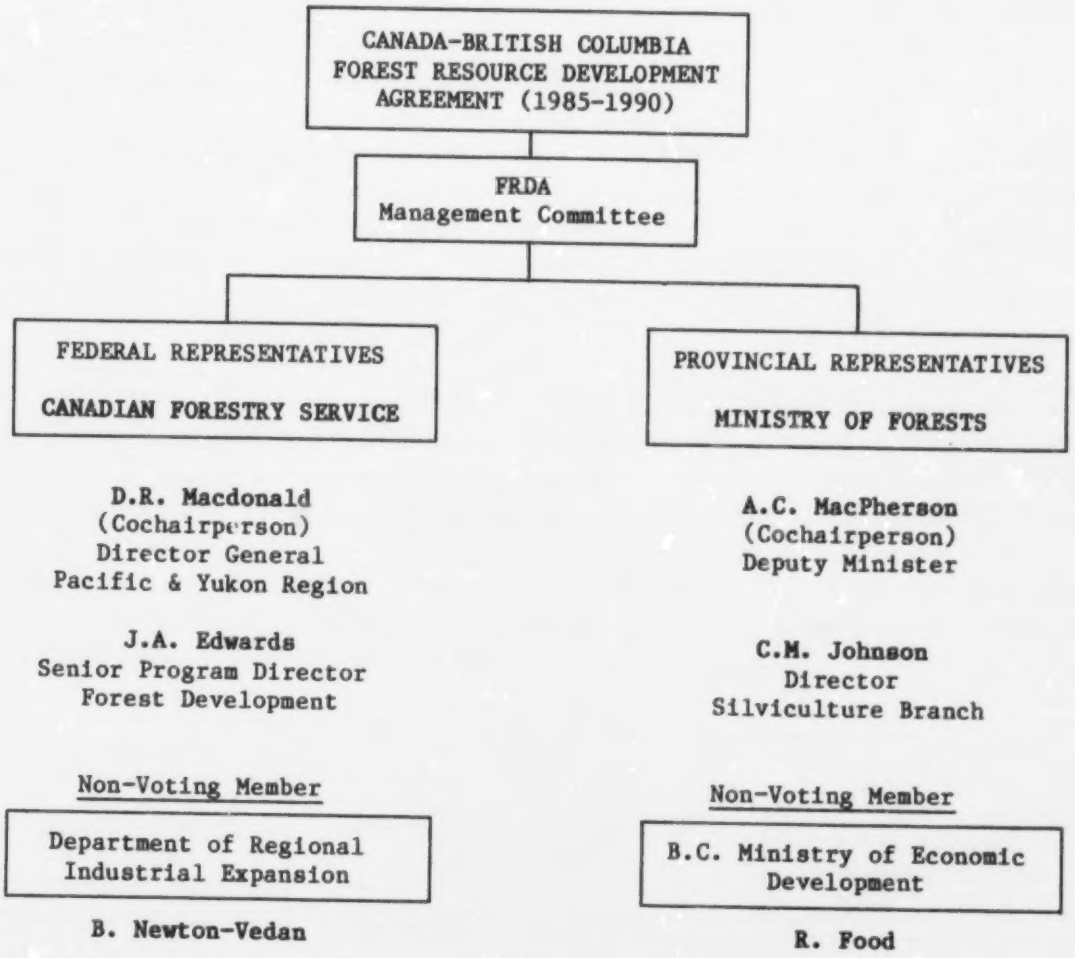

FIGURE 1

THE MANAGEMENT COMMITTEE

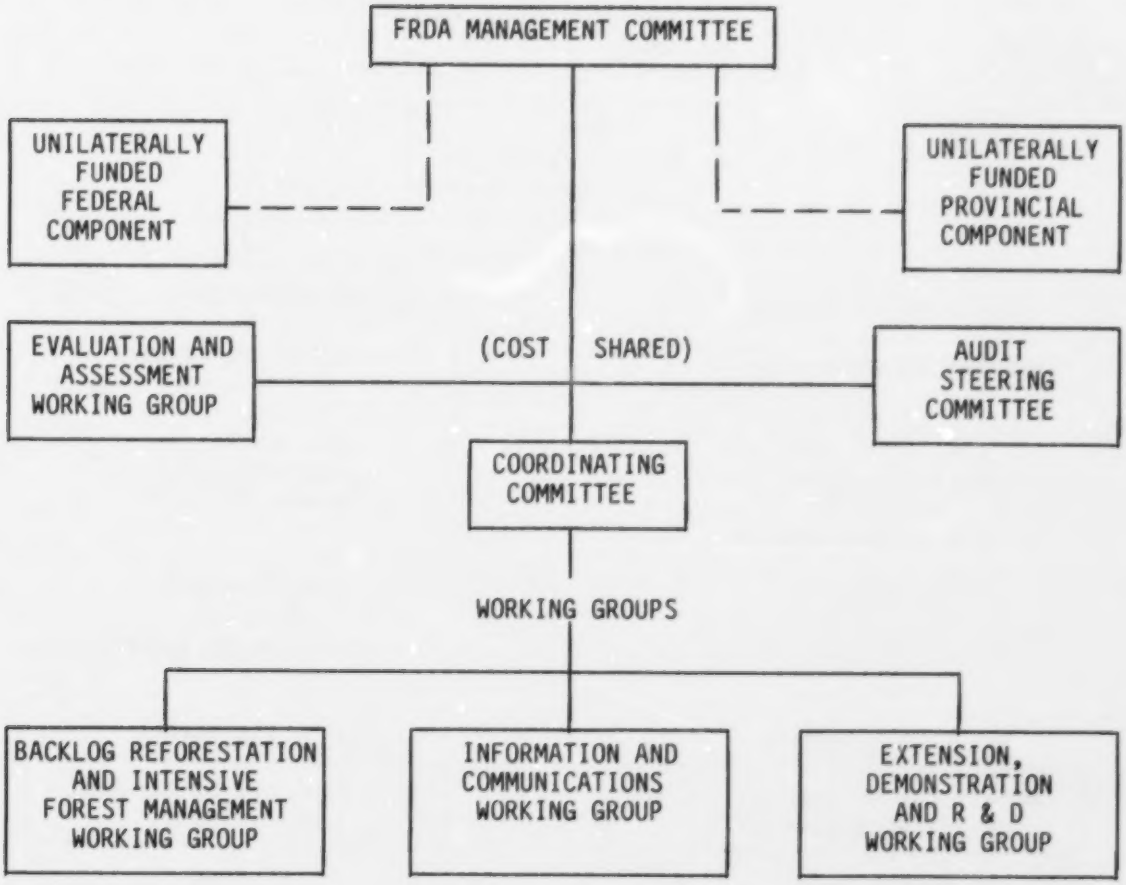
FRDA MANAGEMENT COMMITTEE
UNILATERALLY FUNDED FEDERAL COMPONENT
UNILATERALLY FUNDED PROVINCIAL COMPONENT
EVALUATION AND ASSESSMENT WORKING GROUP
(COST SHARED)
AUDIT STEERING COMMITTEE
COORDINATING COMMITTEE
WORKING GROUPS
BACKLOG REFORESTATION AND INTENSIVE FOREST MANAGEMENT WORKING GROUP
INFORMATION AND COMMUNICATIONS WORKING GROUP
EXTENSION, DEMONSTRATION AND R & D WORKING GROUP

FIGURE 2

FRDA COMMITTEES AND WORKING GROUPS

1985/1986 FRDA ACTIVITIES

A. 1985/1986 EXPENDITURES

FRDA was implemented by both a cost-shared component and unilaterally funded components administered by the Canadian Forestry Service and the Ministry of Forests and Lands.

During the first year of the Agreement, $25,420,590 was spent, as shown in Tables 1 and 2. The expenditures under the provincial component totalled $15,620,647: $8,537,603 was under the cost-shared component and $7,083,044 under the provincial component. The provincial component had a high initial expenditure due to the greatly increased needs for seeds and seedlings created by FRDA.

Federal FRDA expenditures totalled $9,799,943: $8,537,603 was under the cost-shared component and $1,262,340 under the federal component. The federal component concentrated on developing management and inventory plans as an initial step in stand establishment and enhancement. Consequently, the expenditure was low in the first year but will escalate in future years as systems and specific prescriptions are developed. A shortfall in 1985/1986 federal direct delivery component expenditures was due in part to the Federal Government expenditure freeze in the fourth quarter.

TABLE 1

EXPENDITURES BY COMPONENT
($ million)

	COST SHARED COMPONENT	FEDERAL COMPONENT	PROVINCIAL COMPONENT	TOTAL
Federal	8.54	1.26	-	9.80
Provincial	8.54	-	7.08	15.62
TOTAL	17.08	1.26	7.08	25.42

TABLE 2

1985/1986 EXPENDITURES BY SUBPROGRAM
($)

Programs and Subprograms	Federal	Provincial	Cost-Shared		Subprogram Totals
			Federal	Provincial	
Program #1. BACKLOG REFORESTATION					
1.1 Surveys and Prescriptions	52,530	-	510,860	510,860	1,074,250
1.2 Seeds and Seedlings	28,118	6,119,085	2,161,090	2,161,090	10,469,383
1.3 Site Preparation	35,997	-	2,145,699	2,145,699	4,327,395
1.4 Planting	13,942	-	1,986,247	1,986,247	3,986,436
1.5 Implementation	351,000	-	-	-	351,000
1.6 Extension, Demonstration and R & D	94,682	389,877	559,898	559,898	1,604,355
Program Totals	576,269	6,508,962	7,363,794	7,363,794	21,812,819
Program #2. INTENSIVE FOREST MANAGEMENT					
2.1 Brushing, Weeding and Pest Control	-	172,537	170,687	170,687	513,911
2.2 Conifer Release	5,192	-	138	138	5,468
2.3 Juvenile Spacing	-	-	912,748	912,748	1,825,496
2.4 Fertilization	160,000	-	824	824	161,648
2.5 Implementation	308,000	-	-	-	308,000
2.6 Extension, Demonstration and R & D	173,271	333,534	-	-	506,805
Program Totals	646,463	506,071	1,084,397	1,084,397	3,321,328
Program #3. IMPLEMENTATON, COMMUNICATIONS AND EVALUATION					
3.1 Implementation Contracts, Monitoring and Evaluation	-	-	89,412	89,412	178,824
3.2 Communications	39,608	68,011	-	-	107,619
Program Totals	39,608	68,011	89,412	89,412	286,443

B. AMENDMENTS TO 1985/1986 WORK PLAN

No amendments were recommended by the Management Committee to the Ministers during 1985/1986.

The adjustments made to the 1985/1986 work plan under the authority of the Management Committee are shown in Table 3.

TABLE 3

VARIANCE FROM 1985/1986 WORK PLAN
($)

Component	Budget	Expenditures	Variance
Cost-shared (50% Federal; 50% Provincial)	17,600,000	17,075,206	-524,794[1]
Federal Component	2,200,000	1,262,340	-937,660
Provincial Component	6,330,000	7,083,044	+753,044
			-709,410

[1] It is proposed that the cost-shared variance of $524,794 be re-addressed by increasing corresponding expenditures in fiscal year 1988-1989.

C. 1985/1986 ACHIEVEMENTS

1. Cost-Shared Programs

During 1985/1986, 127 212 ha of Crown Land was treated or surveyed: 597 backlog reforestation projects were conducted on 22 934 ha, and 137 intensive forest management projects were conducted on 4 278 ha. The area treated by subprograms is shown in Table 4.

The following sections detail certain goals and accomplishments which complement those presented in Table 4.

TABLE 4

FRDA: 1985/1986 Accomplishments by Subprograms
(Cost-Shared)

	1985/1986 Goals (ha)	1985/1986 Area Treated (ha)	1985/1986 Estimated Employment Created (person-days)
Program #1 Backlog Reforestation			
1.1 Surveys and Prescriptions	81 089	94 913	7 370
1.2 Seeds and Seedlings	18.0 mil.	18 027 mil.	21 400
1.3 Site Preparation	14 995	13 361	7 667
1.4 Planting	12 841	14 660	22 845
1.5 Implementation	NA	NA	NA
1.6 Research and Development	NA	NA	NA
			59 282
Program #2 Intensive Forest Management			
2.1 Brushing, Weeding and Pest Control	958	913	2 097
2.2 Conifer Release	0	0	0
2.3 Juvenile Spacing	3 559	3 360	14 884
2.4 Fertilization	0	5	0
2.5 Implementation	NA	NA	NA
2.6 Extension, Demonstration and Research and Development	NA	NA	
			16 981
Program #3 Implementation, Communications, Evaluation			
3.1 Implementation Contracts, Monitoring and Evaluation			1 518
3.2 Communications			
			1 518
GRAND TOTAL			77 781

Subprogram 1.1: Surveys and Prescriptions

The initial year of FRDA required extra work to obtain inventories, conduct surveys and develop prescriptions or management plans. Thirty-eight percent of the five-year goals for surveys and prescriptions was achieved in the 1985/1986 year. Most of the other subprogram activities are based on sound ecological prescriptions developed under this subprogram.

Subprogram 1.2: Seeds and Seedlings

In order to achieve the planting goal of 150 000 ha over the life of the Agreement, 2000 kilograms of seed were cost-shared in 1985/1986. The cost of the seed was $720,000, based on an average cost of $360 per kilogram.

A total of 18.027 million seedlings was cost-shared for $3.6 million.

Subprogram 1.6: Extension, Demonstration and R & D

This subprogram is aimed at solving technical problems faced by field foresters responsible for implementing FRDA backlog reforestation operations. Under the cost shared component, 34 projects were initiated and 6 completed during 1985/1986, for a cost of $1,119,796. Investigations covered all phases of backlog reforestation with emphasis on mechanical, chemical and prescribed fire approaches to site preparation.

2. Unilaterally Funded Programs

a. Federal Component

During the initial year of the Agreement, the Canadian Forestry Service initiated programs on privately owned lands, Indian forest lands and federal lands. The emphasis was on developing forest inventories and management plans upon which work programs in subsequent years will be based.

In addition, 12 projects were initiated to increase the knowledge pertaining to the renewal of backlog non-satsifactorily restocked land and intensive forest management.

Private Lands Program

The Canadian Forestry Service is developing tools and techniques for forestry on private woodlots, and is providing extension services to those small owners who are often unaware of appropriate forest management strategies. The federal component contributed $250,000 in 1985/1986 - approximately 80% of actual project costs. In 1985/1986 39 projects were initiated on 11 827 ha.

Indian Forest Lands Program

In British Columbia there are 196 Indian Bands which have 338 378 ha of land on 1 606 reserves. Integrated forest land management will contribute to both short-term and long-term employment for Indian Bands.

The Canadian Forestry Service is assisting the development of tools and strategies for forestry on Indian Lands, and is providing extension services. In 1985/1986, 42 projects were

initiated to develop forest inventories and management plans on 129 612 ha.

FRDA is funding 80% of the cost on accepted projects; the Indian Bands are responsible for providing the balance. These commitments are formalized through a Band Council Resolution which must also stipulate that the land will be retained under continuous forest management for a minimum of 15 years.

Federal Component - Extension, Demonstration and R & D

Projects under this subprogram were carried out by universities, the forest industry and consultants in consultation with the Canadian Forestry Service. The following 12 projects were approved in 1985/1986:

- Root Disease Management Demonstration Site, Duncan/ Cowichan Highway
- Research on Douglas-fir Fertilization
- Influence of Site on Tree Resource Allocation to Fine Roots and its Effects on the Harvestable Productivity of Coastal Douglas-fir Stands
- Development of a Vegetation Management Cooperative and Information Service
- Prescribed Fire Effects on Tree Growth and Site Nutritional Status
- Container Nursery Douglas-Fir Dieback Research
- Monitoring of Environmental Parameters During Container Nursery Douglas-fir Dieback Research
- Analytical Techniques for Assessing Stress and Injury in Conifer Seedlings
- Chromosome Sorting of White Pine Genetic Studies of Western White Pine
- Causes of Cone and Ovule Abortion and Case-Hardening of Douglas-fir, Interior Spruce, Western Hemlock and Western Red Cedar

- Effects of Mycorrhizal Fungi on Conifer Nursery Stock and Reforestation Success in interior British Columbia
- Supplementary Data Collection and Software Development in Support of Vegetation Management at Carnation Creek

Federal Component - Communications

A five-year Communication Plan for FRDA has been developed under the federal component. Other activities included sponsoring an issue management training workshop, developing a direct delivery video of the federal component, publishing the Agreement, and promoting FRDA through press releases, displays and publications.

b. Provincial Component

The Ministry of Forests is focusing on growth and yield performance monitoring, seed supply and processing needs, applied research support, and pest control activities.

In order to accommodate the escalating reforestation targets within the Agreement, a large expenditure on expanded seedling facilities was required within the first year.

Nursery Technology

The provincial seed processing and storage facilities were previously inadequate to support the reforestation program under this Agreement. There was also an urgent need to increase seed storage capacity. More modern seed processing equipment combined with improved testing facilities to improve seed quality have now been installed in Surrey under FRDA funding. These were accompanied by enlarged modern cold storage facilities to

ensure the integrity of the internal environment of the seed storage units and to make them secure from vandalism and natural elements.

In addition, open nursery compound systems for containerized stock were constructed at Thornhill, Surrey, Green Timbers, Koksilah and Campbell River nurseries.

Brushing, Weeding and Pest Control

Several extensive and intensive surveys for forest pests were completed. A strategy was developed for surveying root diseases in southern interior forests. A computer program was modified to record pest control projects and keep track of infestations.

Six publications and two technical posters were produced, as well as several graphic art illustrations.

Extension Demonstration and R&D

A provincial component expenditure of $389,877 under subprogram 1.6 was spent on the construction of new research greenhouses at Red Rock (Prince George Region) and on improving the ability to predict the future growth and yield of plantations.

The provincial component of subprogram 2.6 supports research on the growth and yield effects of intensive forestry treatments. Expenditures of $333,535 were directed at analyzing the effects of thinning and fertilizing Douglas-fir and western hemlock on the Coast; and fertilizing lodgepole pine in the Interior.

Communications

This subprogram is aimed at publicizing the objectives, progress and future direction of FRDA initiatives. Under the provincial component, two series of community advertisements were run, one describing the Agreement, the other outlining regional updates. In addition, several press releases were distributed announcing the Agreement and providing periodic updates.

1986/1987 WORK PLAN

The following Work Plan and Budget for 1986/1987 has been approved by the Management Committee as per the Canada-British Columbia Forest Resource Development Agreement (1985-1990), Section 3.6(a):

PROGRAM	Federal Component ($)	Provincial Component ($)	Total ($)
FRDA: Federal Component			
1. Backlog Reforestation	2,751,000	-	2,751,000
2. Intensive Forest Management	1,538,000	-	1,538,000
3. Implementation, Communication and Evaluation	111,000	-	111,000
SUB-TOTAL	4,400,000	-	4,400,000
FRDA: Provincial Component			
1. Backlog Reforestation	-	3,697,000	3,697,000
2. Intensive Forest Management	-	653,000	653,000
3. Implementation, Communication and Evaluation	-	50,000	50,000
SUB-TOTAL	-	4,400,000	4,400,000
Cost-Shared Component			
1. Backlog Reforestation	13,014,500	13,014,500	26,029,000
2. Intensive Forest Management	3,462,500	3,462,500	6,925,000
3. Implementation, Communication and Evaluation	1,123,000	1,123,000	2,246,000
SUB-TOTAL	17,600,000	17,600,000	35,200,000
TOTAL	22,000,000	22,000,000	44,000,000